


PCT (ANNEX - FEE CALCULATION SHEET)

Original (for SUBMISSION)

(This sheet is not part of and does not count as a sheet of the international application)

0	For receiving Office use only	
0-1	International Application No.	
0-2	Date stamp of the receiving Office	
0-4	Form PCT/RO/101 (Annex) PCT Fee Calculation Sheet	
0-4-1	Prepared Using	PCT-SAFE [EASY mode] Version 3.50 (Build 0002.163)
0-9	Applicant's or agent's file reference	14975-7PCT
2	Applicant	MPB TECHNOLOGIES INC.
12	Calculation of prescribed fees	fee amount/multiplier Total amounts (CAD)
12-1	Transmittal fee T	⇔ 300
12-2-1	Search fee S	⇔ 1600
12-2-2	International search to be carried out by	CA
12-3	International filing fee (first 30 sheets) I1	1489
12-4	Remaining sheets	8
12-5	Additional amount (X) I6	16
12-6	Total additional amount I2	128
12-7	I1 + I2 = I	1617
12-12	EASY Filing reduction R	-106
12-13	Total International filing fee (I-R) I	⇔ 1511
12-14	Fee for priority document Number of priority documents requested	0
12-15	Fee per document (X) I0	0
12-16	Total priority document fee: P	⇔
12-17	TOTAL FEES PAYABLE (T+S+I+P)	⇔ 3411
12-19	Mode of payment	other To be charged to the Visa account that is on file in the name of France J. Côté of Ogilvy Renault.
12-20	Deposit account Instructions The receiving Office	Canadian Patent Office (RO/CA)
12-20-2	Authorization to charge any deficiency or credit any overpayment in the total fees indicated above	✓
12-21	Deposit account No.	600000257
12-22	Date	28 September 2004 (28.09.2004)
12-23	Name and signature	OGILVY RENAULT 

13-2-4	Validation messages Priority	Green? No priority of an earlier application has been claimed. Please verify
13-2-7	Validation messages Contents	Yellow! The power of attorney or a copy of the general power of attorney will need to be furnished unless all applicants sign the request form.
	Validation messages Contents	Yellow The abstract shall be as concise as the disclosure permits (preferably 50 to 150 words if it is in English or when translated into English).

... Raman amplification to increase the maximum amount of pump power that can be delivered to the ROPA. According to the prior art, high power at the ROPA pump wavelength, λ_p , is launched directly into the fiber and the maximum launch power is limited by the onset of pump depletion by Raman noise oscillations due to the high Raman gain at $\sim (\lambda_p + 100)$ nm. In preferred embodiments of the present invention, a 'primary' pump source of wavelength shorter than λ_p is launched into the delivery fiber along with two or more significantly lower-power 'seed' sources, among which is included one at λ_p . The wavelength and power of the seed source(s) are chosen such that, when combined with the high-power primary source, a series, n , where n is of Raman conversions within the fiber ultimately leads to the development of high power at λ_p . In another embodiment, one or more of the seed sources at wavelengths shorter than λ_p are replaced by reflecting means that return, into the fiber, backward-travelling amplified spontaneous Raman scattered light resulting from high power at the fiber at a wavelength one Raman shift below the particular seed wavelength. In either case, the high power at λ_p is developed over a distributed length of the fiber, reaching its maximum some distance into the fiber and exceeding the maximum power possible at that point with the prior art.